Claims

- 1. An esterification process for the reduction of acids in a hydrocarbon containing
- composition, said process comprising contacting the hydrocarbon containing composition
- including hydrocarbons of less than 24 carbons with an esterification catalyst at
- esterfication temperature and pressure.
- 2. An esterification process as claimed in claim 1, wherein the hydrocarbon
- containing composition is a C₄ to C₂₀ hydrocarbons containing composition.

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- 3. An esterification process as claimed in claim 1, wherein the hydrocarbon
- containing composition is a Fischer-Tropsch (FT) condensate fraction.
- 4. An esterification process as claimed in claim 1, wherein the esterification catalyst
- includes one or more catalytically active metal oxides.
 - 5. An esterification process as claimed in claim 4, wherein the metal oxides include
 - one or more oxides selected from transition metals in group Ib to VIIIb.
- 20 6. An esterification process as claimed in claim 4, wherein the metal oxide consists
- of molybdenum oxide or tungsten oxide.
 - 7. An esterification process as claimed in claim 4, wherein the molybdenum, the
 - tungsten, or any other transition metal oxide is supported on a substrate.

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- 8. An esterification process as claimed in claim 7, wherein the substrate is alumina,
- silica-alumina, or silica.
- 9 An esterification process as claimed in claim 1, wherein the esterification catalyst
- 30 is a catalyst selected from the group of transition metal oxides in group Ib to VIIIb on

alumina catalyst, including molybdenum oxide on alumina catalyst and tungsten oxide on alumina catalyst, .

- 10. An esterification process as claimed in claim 1, wherein the esterification temperature is from 100°C to 320°C.
 - 11. An esterification process as claimed in claim 10, wherein the esterification temperature is from 170°C to 250°C.
- 10 12. An esterification process as claimed in claim 11, wherein the esterification temperature is from 190°C to 210°C.
 - 13. An esterification process as claimed in claim 1, wherein the esterification pressure is from atmospheric pressure to 100 Bar.
 - 14 An esterification process as claimed in claim 13, wherein the esterification pressure is from 1 to 55 Bar.
- 15. An esterification process as claimed in claim 14, wherein the hydrocarbon condensate fraction is a distilled fraction from the FT condensate fraction.
 - 16. An esterification process as claimed in claim 1, wherein the hydrocarbon containing composition has an acid level of 0.5 mg KOH/g or higher.
- 25 17. An esterification process as claimed in claim 16, wherein the acid level in the hydrocarbon containing composition is up to 12 mg KOH/g.
 - 18. An esterification process as claimed in claim 3, wherein the alcohol to acid ratio in the FT hydrocarbon is between 9 and 92 on a molar basis.

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- 19. An esterification process as claimed in claim 3, wherein methanol or another alcohol is added to the FT hydrocarbon feed to increase the alcohol to acid ratio.
- 20. An esterification process as claimed in claim 1, wherein the product of the process has an acid level of less than or equal to 0.5 mg KOH/g.
 - 21. An esterification process as claimed in claim 20, wherein the product of the process has an acid level of from 0.1 mg KOH/g to 0.3 mg KOH/g.
- 10 22. An esterification process as claimed in claim 1, wherein the process is carried out in a continuous flow reactor.
 - 23. An esterification process as claimed in claim 1, wherein the process is carried out at an LHSV of from 0.1 to $5 h^{-1}$.
 - 24. An esterification process as claimed in claim 23, wherein the process is carried out at an LHSV of from 0.5 to 2 h⁻¹.

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